

**A Remember Your Tables**

Example : List the first six multiples of 7.

Working : Remember the table of 7 and list the outcomes :
7, 14, 21, 28, 35, 42.

1 List the first six multiples of

a) 3

b) 5

2a) From the list in 1a) choose the *even* multiples of 3.

.....

b) Complete this comment with a number.

The even multiples of 3 are the multiples of

3a) From the list in 1b) choose the *even* multiples of 5.

.....

b) Comment.

.....

4a) List the even multiples of 4.

.....

b) Comment.

.....

A number is called divisible if it can be divided without leaving a remainder.

Example : a) Is 21 divisible by 3?
b) Is 34 divisible by 4?

Working : a) $21 \div 3 = 7$, no remainder
Yes, 21 is divisible by 3.
b) $34 \div 4 = 8$, remainder 2
No, 34 is not divisible by 4.

5 Study this list of numbers and circle those that are divisible by 4.

14 24 42 56 100

6 Circle the numbers which are divisible by 6.

14 24 42 56 100

B True Statements

Example : Annabel says, "The sum of two odd numbers is even." Check it out. Is this true?

Working : Remember the last digit of an odd number must be 1, 3, 5, 7 or 9.

Try	$19 + 35 = 54$	even	} Annabel's statement is true.
Try	$63 + 77 = 140$	even	
Try	$201 + 555 = 756$	even	

1 Annabel makes some more statements. Each time check it out and decide whether the statement is true or false.

a) *The sum of three odd numbers is even.*

.....
.....
.....
.....

b) *The difference between two odd numbers is even.*

.....
.....
.....
.....

c) *All even numbers are divisible by 4.*

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.....

2 Make your own true statements.

a)

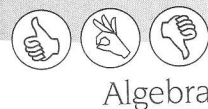
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b)

.....



80 Negative Numbers



Algebra

A Below Zero

Above zero are the positive numbers. For instance +3 means *three above zero* or *positive three*.

Below zero are the negative numbers. For instance -2 means *two below zero* or *negative two*.

Most numbers we use in our daily life are positive numbers, therefore +3 is usually written as 3.

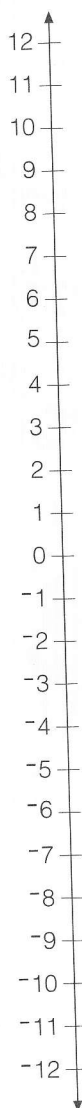
Negative numbers are used for instance when measuring temperatures or when we borrow money from a bank or when we play games like golf.

Example : The temperature is now -2 degrees.

- What will the temperature be if it rises 3 degrees?
- What if it drops 5 degrees?

Working : Look at the numberline below.

- Start at -2, go up 3, answer : +1 degree
- Start at -2, go down 5, answer : -7 degrees



- Compare the two temperatures. Colour the circle with the higher temperature.

- $+3$ — -2
 - -5 — -8
- -6 — $+1$
 - 0 — -4

- The temperature is now -6 degrees.

- What will the temperature be if it rises 5 degrees?
- What if it drops 3 degrees?

- How much is the rise or drop ...

- moving from +4 to -4?
.....
- moving from -8 to -2?
.....

- Start at 12, go down in equal steps of 4.

12, **8**,

- Start at -10 go up in equal steps of 6.

-10,

B Roll the Dice

A game is played with two dice of different colour, for instance one white and one black. The number rolled with the white dice is positive, the number rolled with the black dice is negative.

Each person rolls the two dice together and works out their total score. The person with the highest score wins.

Example : Annabel rolled : Harry rolled : Who won?

Working : Annabel rolled +5 and -2, scoring 3.
Harry rolled -4 and +3, scoring -1
Since 3 is more than -1, Annabel won.

- Sam and Jake played the game several times. Each time work out the scores and draw a circle around the winning score.

- Sam score
 - Jake score
- Sam score
 - Jake score

- What is the highest possible score in this game?

.....

- What is the lowest possible score?

.....

- If the game is played with two black dice then both the numbers are negative.

- Calculate the score

- What would be the highest and what would be the lowest possible score?

highest lowest

- Tama rolls two black and one white dice.

- Calculate his score

- Calculate highest and lowest possible scores.

highest lowest

**A Smarty Pants**

1 In a classroom quiz pupils could win smarties by giving the correct answer. Find out exactly how many each pupil won by using these clues.

- a) Graham ate 8 of his smarties and has 25 left.
Graham won smarties.
- b) Anna shared her smarties with her best friend.
Each got 16 smarties. Anna won smarties.
- c) If you double Dale's smarties you get 58.
Dale won smarties.
- d) Danielle won just 3 short of 30 smarties.
Danielle won smarties.
- e) Ben shared his smarties with 2 other boys.
Each got 12 smarties and there were two left.
How many did Ben win?

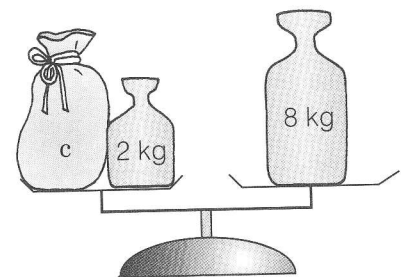
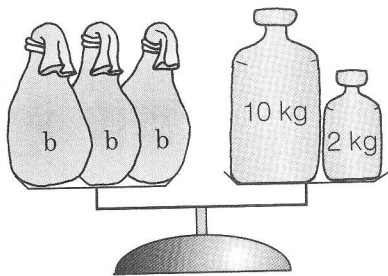
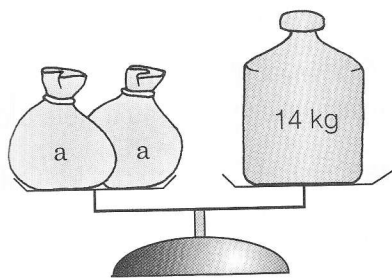
B Empty Spaces

Work out the number that must go in the empty space to make the sentence true.

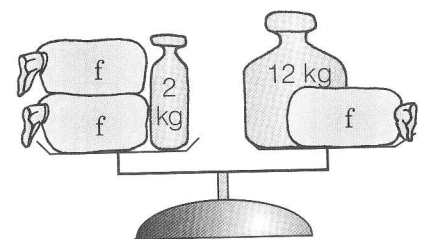
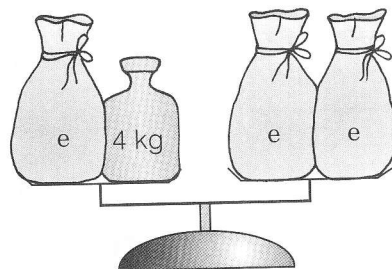
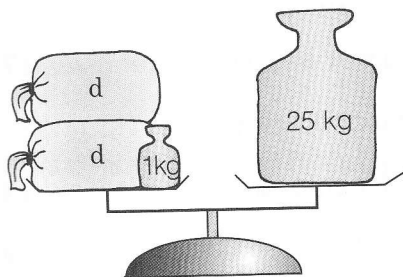
- 1a) $\square + 10 = 53$ b) $\square + 6 = 42$
- c) $39 + \square = 89$ d) $100 - \square = 71$
- e) $\square - 10 = 25$ f) $\square - 46 = 14$
- 2a) $2 \times \square = 30$ b) $4 \times \square = 84$
- c) $\square \div 5 = 12$ d) $81 \div \square = 27$
- e) $\square \times 6 = 96$ f) $\square \div 7 = 11$
- 3a) $\square + 376 = 1000$ b) $\square - 150 = 530$
- c) $5 \times \square = 1500$ d) $56 \div \square = 28$
- e) $\square \times 25 = 2500$ f) $\square \div 10 = 39$

C Bags in Balance

1 Find the weight of each of the bags on these balances. Bags with the same letter have the same weight.



- a) Each bag weighs kg. b) Each bag weighs kg. c) The bag weighs kg.



- d) Each bag weighs kg. e) Each bag weighs kg. f) Each bag weighs kg.